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Contribution to the chemical composition of minerals of the mimetite-pyromorphite series from the Guatomo mine near Tham Thalu, Bannang Sata District, Yala Province (Thailand)

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Abstract

The Guatomo mine is considered as one of the classic localities of mimetite worldwide. The chemical composition of six samples of minerals of mimetite-pyromorphite series from the Guatomo mine, representing different morphologies, colours as well as various geological environments/host rocks, was studied in detail by EMPA-WDS. This study revealed that both mimetite as well as pyromorphite are present at the Guatomo mine, representing rather variable compositional series ranging from the nearly end member mimetite (sample M1 - up to 0.03 *apfu* of P, sample M4 - up to 0.23 *apfu* of P and sample M5 with up to 0.18 *apfu* of P), through P-enriched mimetite (with 0.38 *apfu* of P) and As-rich pyromorphite (with 0.82 *apfu* of As, sample M2) up to As-enriched pyromorphite (sample M3 with As content reaching up to 1.03 *apfu* and sample M6 with up to 0.80 *apfu* of As). Besides of Pb, As, P and Cl only negligible amounts of Ca, V and S were detected in studied samples.

Key words: *mimetite, pyromorphite, supergene minerals, chemical composition, Guatomo mine, Tham Thalu, Thailand*

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